DNA Replication Worksheet

Is DNA replication described as conservative or semi-conservative? What does that mean?

What are the 3 parts of a nucleotide?

The pyrimidine bases are?

The purine bases are?

Is DNA replication a catabolic or anabolic process?

What is the starting point in replication called?

Which strand is synthesized towards the replication fork?

What type of bond does helicase break?

What is at the 5’ end of DNA? What about the 3’ end?

List the enzymes used in DNA Replication? Function?

Which of the base pairs would be harder to split? Why?

A – T or G – C

Which of the strands (leading or lagging) would use more RNA primer? Why?
A SUMMARY OF DNA REPLICATION

1. Helicases unwind the parental double helix.
2. Single-strand binding proteins stabilize the unwound parental DNA.
3. The leading strand is synthesized continuously in the 5'→3' direction by DNA polymerase.
4. The lagging strand is synthesized discontinuously. Primase synthesizes a short RNA primer, which is extended by DNA polymerase to form an Okazaki fragment.
5. After the RNA primer is replaced by DNA (by another DNA polymerase, not shown), DNA ligase joins the Okazaki fragment to the growing strand.

Overall direction of replication